

Citrus Greening Disease

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Florida Keys citrus trees are susceptible to a wide variety of plant diseases such as citrus canker, tristeza, blight, greasy spot, Alternaria brown spot, Phytophthora-induced diseases, melanose, scab, and postbloom fruit drop (PFD). There is a serious citrus disease called Citrus Greening, or Huanglongbing (yellow dragon disease) that was detected in southern Miami-Dade County on pummelos, oranges, kumquats, limes, and other citrus varieties. You should be concerned about Citrus Greening because it affects all citrus cultivars causing infected trees to decline in health and become non-fruit bearing, sparsely leafed tree.

Once a new plant disease is in the neighboring county, it always best to learn the disease symptoms, how it is transmitted, what does it affect, what control measures are available, and to make sure you are growing healthy citrus trees.

For a plant disease to take hold in a new location, three items must be present: the disease, a favorable environment, and the host plant. The Florida Keys has suitable weather conditions for citrus trees. There is potential for the spread of Citrus Greening to enter the Keys and attack our backyard citrus trees.

Citrus Greening is transmitted by psyllids, insects that feed and survive primarily on citrus and citrus relatives. And they are also transmitted by the movement of infected budwood and citrus trees.

Citrus Greening can infect nearly all citrus species, cultivars and hybrids, as well as some citrus relatives. Sweet oranges, mandarins, and mandarin hybrids (tangelo) are highly susceptible. Lemons, grapefruit, pummelos, and sour orange are also affected and are rendered non-productive when infected. Mexican lime, trifoliolate orange and some trifoliolate orange hybrids are more tolerant and may show only some leaf symptoms.

Citrus Greening disease can be recognized by leaf and fruit symptoms. Early symptoms of citrus greening are small yellow leaves on one limb or section of the tree canopy. The most diagnostic symptoms are a mottled or blotchy appearance on the leaf surface. The yellowing spreads throughout the tree and affected trees show twig dieback and trees rapidly degenerate into a non-productive state in 2 to 3 years. In trees with advanced stages of the disease, the leaves are small and frequently show mineral (zinc or manganese) deficiency

symptoms with yellow veining. Fruit are sparse, small, abnormal in appearance and fail to color properly, thus the name "greening." The affected fruit often contain aborted seeds and have poor juice quality.

Control is difficult if the bacteria is widespread and the psyllid vector is well established. There are no disease tolerant mandarin, orange, or grapefruit cultivars to replace declining trees. The general control strategy has been to eradicate all existing sources of Citrus Greening within an area, then replant with disease-free trees grown from clean budwood. Psyllid populations must also be reduced as much as possible.